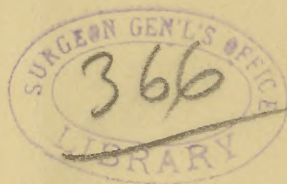


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Clinical Observations on the  
Action of Sulfonal in  
Insanity.

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# CLINICAL OBSERVATIONS ON THE ACTION OF SULFONAL IN INSANITY.

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As so much has been written of late on sulfonal, it will not be necessary to describe the drug or give its history. In order to test the claims made for this new remedy it was determined to make a series of experiments on cases in this hospital. The observations here recorded were made on patients especially selected, many of whom had resisted the action of other hypnotics.

CASE I.—*Melancholia Agitata*. A. S., woman, aged forty-one. Before and after admission she suffered considerably from loss of sleep, and various hypnotics were administered with but little effect. A combination of chloral and tincture of hyoscyamus gave the most prolonged sleep, but it was restless in character and never continued more than six hours. Sulfonal was administered five times in 15 gr. doses and once in a dose of 30 grs. With the first named quantity sleep resulted in from half an hour to two hours, and continued from five to nine and a half hours. The dose of 30 grs. gave a sleep of nine hours' duration, and was induced in forty-five minutes. With two exceptions, when the sleep was restless and broken, its action was quiet and peaceful. No unpleasant after-effects were produced.

CASE II.—*Chronic Mania*. C. C., female, aged thirty-six. This patient had been unable to sleep more than four hours any night, although she had taken most of the sleep-producing remedies. Both day and night she was noisy and destructive and usually kept other patients awake by her shouting and screaming. Six trials in all were made, in five of which 30 grs. were given and in one 45 grs. With 30 grs. the result was obtained in from three-quarters of an hour to two and one-half hours, and continued from four to nine hours. When the drug gave only four hours' sleep (second trial,) its character was restless. The next night, therefore, 45 grs. were given, with which dose sleep was produced in half an hour, and lasted eight and a half hours. After this half-drachm doses sufficed. No unpleasant after-effects were noted.

CASE III.—*Melancholia*. K. P., woman, aged thirty-six. Com-



plained a good deal of loss of sleep, but generally slept well after taking chloral. As the patient was rapidly forming the chloral habit it was thought well to substitute sulfonal. Fifteen grs. were given twice a night for two nights, when the action proved so slight that the remaining trials were made with 30 gr. doses. With this quantity, which she took four times, sleep resulted each time within an hour and lasted from five to eight hours. In character it was natural and no unpleasant after-effects were observed. After the sixth trial the medicine was discontinued, and from that time she continued to sleep well without any hypnotic until her discharge.

CASE IV.—*Melancholia with Frenzy*. M. A. Q., woman, aged thirty-three. Much disturbed, seldom sleeping more than three hours any night, and occasionally less. The first dose she received was 15 grs., and no effect being apparent in three hours, a second similar dose was given with the effect of producing in one hour a sleep that lasted four and a half hours. The other trials, six in number, were made with 30 gr. doses and gave satisfactory results; sleep commencing in from one to three hours and continuing from six to eight hours. Its character was quite natural, no unpleasant after-effects were observed, and the patient has been less disturbed since taking it.

CASE V.—*Melancholia, With Periods of Great Excitement*. Mrs. E. McM., woman, aged forty. Whenever excited patient is wakeful, noisy, refuses to stay in bed and is persistently suicidal. Two doses of 15 grs. each were given the first night with negative results. The second trial was made with two doses of 30 grs. After taking the first dose, patient went to sleep in an hour, remained asleep for two hours, and was awake for one hour afterwards, when she was given the second dose, which produced in half an hour a sleep that continued for four hours. Five other trials with 30 gr. doses were made and resulted as follows: Sleep commenced once in two hours, once in three hours, once in two and one-half hours, once in half an hour, and once in three-quarters of an hour. It continued once five hours, twice six hours, once eight hours, and once seven hours. In no instance was the sleep fitful in quality, and no unpleasant after-effects were produced.

CASE VI.—*Sub-acute Mania*. E. N., woman, aged thirty. Was quite comfortable until recently, when she began to express delusions and lose sleep. Sulfonal was administered seven times, three times in 15 gr. doses, and the remaining number in doses of 30 grs. With the first named quantity sleep commenced once in

three-quarters of an hour, once in an hour and three-quarters, and once in two hours, and continued the first night seven hours, the next seven and three-quarter hours, and the last five hours. With the 30 gr. doses its effects were in each trial produced within an hour and a half, and continued from seven to nine hours, resembling in character normal sleep. Slight somnolence the next day after taking the first dose of thirty grains was the only after-effect noted. The patient is now quite comfortable and rests well without any hypnotic—sleeping generally all the night.

CASE VII.—*Periodic Mania*. P. A., woman, aged sixty-two. Recently returned from home, (where she had been on parole,) in a very disturbed condition. It was impossible for her to obtain sleep lasting more than four or five hours. At times would keep all the other patients in the ward awake with her shouting and pounding on the door. Thirty grains were given at the first trial, and patient slept seven hours, having gone to sleep three hours after taking it. Five more trials with the same quantity were made with very satisfactory results, *i. e.*, sleep began in from half an hour to three hours, and continued from seven and a half to eight hours. With one exception the rest obtained was quiet and peaceful, and no unpleasant after-effects were produced.

CASE VIII.—*Chronic Mania*. E. N., woman, aged forty-five; violent, homicidal, destructive and noisy; generally sleeps from four to seven hours when taking chloral. Sulfonal was administered in all seven times in doses of 30 grs. with the following results: Sleep resulted once in two hours, once in an hour and a quarter, twice in half an hour, and three times in an hour. It was natural in character and continued twice eight hours, once eight and one-half hours, once six and one-half hours, and three times nine hours. No after-effects. The sleep produced by chloral in this case was broken in character, and after the effects ceased the patient became noisy. With sulfonal the night that she slept six and one-half hours only, was quiet when awake.

CASE IX.—*Periodic Insanity*. A. H., female, aged thirty-one. During the periods of excitement, the patient's rest is much broken. She is then very noisy up and about her room most of the night, pounding and vociferating, and frequently disturbing the sleep of the others. Thirty grs. were given six times and 45 grs. once. Sleep resulted in each instance within an hour and a half and continued from four to nine hours; once four hours, once seven hours, once six hours, once eight hours, and three times nine hours. The fifth administration produced sleep of a restless

character, lasting only four hours. The next night 45 grs. were given, by means of which dose the patient obtained nine hours of nearly natural sleep. The seventh trial was made with a dose of 30 grs. when the effects were apparent in an hour, and continued eight hours. No after-effects.

CASE X.—*Chronic Mania*. W. M., woman, aged thirty-one. Unless having had chloral administered, patient is noisy at night. Sulfonal was administered eight times with unsatisfactory results. Three times doses of 30 grs. were given, but the sleep obtained was broken, and in the aggregate did not amount to three hours during any one night. Forty-five grs. were then given for three successive nights, and patient did not get to sleep until three hours had passed. The character of the sleep produced was the same as when she took doses of 30 grs, and its longest duration was only four hours. With 60 gr. doses, which were given twice, the patient went to sleep each time in an hour, and slept soundly four hours. Whenever this patient took chloral in doses of 20 grs. she always obtained from six to eight hours of sound sleep.

CASE XI.—*Acute Mania*. A. D. M., woman, aged forty-one. Very talkative, incoherent, excitable and noisy. Her nights were sleepless. Six observations were made with doses of 30 grs., and the results obtained were in each instance very gratifying. Sleep was produced as follows: Once in two hours, once in an hour, and four times in half an hour. She slept soundly one night seven and one-half hours, another six hours, another eight hours, and three nights nine hours and a half. No unpleasant after-effects were produced.

CASE XII.—*Melancholia with Frenzy*. H. B., woman, aged sixty-five. By reason of her excitement she was rapidly losing flesh and strength. At times would run up and down the ward wringing her hands and bemoaning her fate, and it was impossible to quiet her. She would also pick her skin, pull out her hair, and tear her clothing. In this case sulfonal was given during the day to test its value as a sedative. Morphia had been given hypodermically with but slight result. January 7th—Was given 15 grs. early in the morning, and after an hour became quiet and remained so for two hours. Again becoming disturbed she was given another dose of the same quantity, and in half an hour she became quiet, and an hour later went to sleep for four hours. January 8th—Was given two more doses of the same amount with similar effect. Both nights the patient slept about six hours, and since that time she has been decidedly more comfortable.

CASE XIII.—*Dementia*. W. J. D., male, aged forty-two. Generally wakeful, and inclined to get out of bed and wander about the ward when not under the influence of hypnotics. Seven trials were made with doses of 30 grs. The first administration induced in half an hour a sleep lasting eight hours. In the remaining six trials sleep resulted in from half an hour to one hour and a half, and continued from six to eight hours. Once it was restless and broken, but in the other trials natural. No unpleasant after-effects were observed. With this patient a combination of chloral and hyoscyamus generally produced continuous sleep for six hours.

CASE XIV.—*Chronic Melancholia*. N. D., male, aged fifty-six. Somewhat irritable, and given to scolding; noisy at night; resists the action of the usual hypnotics with the exception of chloral, which generally gives from six to eight hours' sound sleep. Three doses of 30 grs. each were given to this patient. The first produced sleep in three-quarters of an hour and continued six and one-half hours, the second trial resulted in the effects being produced in an hour and a quarter and continuing seven hours, but the character of the sleep was restless. Following the third administration the patient went to sleep in an hour, and slept soundly seven hours. No unpleasant after-effects were produced.

CASE XV.—*Melancholia*. G. B., male, aged twenty-seven. Whatever sleep this patient obtained before taking sulfonal was generally broken. Seven trials with doses of 30 grs. were made. In the first, sleep resulted in two hours and continued six hours; in the second went to sleep in one hour, and slept seven and a half hours; third, effects produced in an hour, and continued seven and one-half hours; fourth, was asleep in an hour and slept five hours, character was broken and restless; fifth, went to sleep in an hour, and slept soundly eight hours; sixth, action began in an hour and the sleep produced continued nine a half hours; seventh, the effects were observed in half an hour and continued ten hours. With the exception of the fourth trial the character of the sleep was natural. No unpleasant after-effects were noticed.

CASE XVI.—*Senile Dementia with Depression*. H. W., man, aged seventy-three. Generally noisy at night and not inclined to remain in bed. Doses of 30 and 45 grs. were given. First trial, after taking 30 grs. went to sleep in an hour and slept well for for nine hours; was somewhat somnolent the next day. Second, 30 grs., went asleep in an hour and a half, but slept only three hours. Third, 30 grs., result the same as in the second trial. Fourth, 30 grs., slept fitfully during the night about three hours.

Fifth, 45 grs., asleep in an hour, and remained asleep for six hours. Sixth, dose 45 grs; the result of this trial was the same as that in the fifth. Seventh, dose 45 grs., effects were produced in an hour and continued for seven hours. With the exception of the day following the first administration, no unpleasant after-effects were produced.

CASE XVII.—*Melancholia*. L. D., woman, aged sixty-six. Somewhat hypochondriacal. From the time of admission has complained of not sleeping well. The reports of the night nurses show that she generally obtained sleep of several hours' duration. Nine trials were made with 15 gr. doses, and the sleep that resulted was produced within an hour and a half, and continued from five to seven hours. She complained, however, that she did not get a restful sleep. Four trials of 30 gr. doses were then made, in each of which sleep resulted within an hour and continued nine hours. Said that she rested better than at any time since admission, but thought the medicine produced constipation. This statement, however, is not borne out by the nurse.

CASE XVIII.—*Acute Mania*. F. C., woman, aged thirty-six. Recently admitted. Before coming to the hospital had taken sulfonal with good results. Patient refused to take food and medicine. Said that her dead father appeared to and told her that she must take neither, but must be cured by faith. Patient was fed by means of stomach-tube, sulfonal being given with the feeding mixture. Four times it was given in doses varying from 15 to 60 grs., but the patient did not obtain more than two hours' sleep at any one time. Before admission she resisted the action of other hypnotics.

REMARKS.—Omitting Case XII, in which it was not used as a hypnotic, sulfonal was administered 119 times on 114 nights, as follows: In 15 gr. doses 26 times, in 30 gr. doses 81 times, in 45 gr. doses 9 times, and 3 times in 60 gr. doses. On 83 nights sleep was produced which continued six hours or more; on 20 nights, from three to six hours, and on eleven nights less than three hours. The sleep produced was natural on 97 nights and restless and broken on 17. In Case X and Case XVIII, the administration did not give satisfactory results. The time required to produce sleep was on the average one hour and a quarter. The only unpleasant after-effect noted was slight somnolence in two or three instances. With the later administration of the drug in these same cases this symptom was not persistent. In regard to the dosage, the facts brought out by these observations seem to indicate that

not much can be expected from 15 gr. doses in the class of cases in which the trials were made. Generally 30 grs. will be found sufficient to bring about a quiet and refreshing sleep. As to the method of administration, in the early trials sulfonal was given suspended in mucilage, but later in hot milk and hot gruel. The principal advantage of using the later menstruum was increased promptness of action. (In one case there was a difference of an hour between the two methods.) During the period of these experiments comparisons were made with other hypnotics, and the conclusions arrived at were, that in the majority of cases the sleep produced by sulfonal was the most satisfactory; it was calmer, continued longer, and was more refreshing than that produced by any other hypnotic. Among the advantages that sulfonal possesses over other sleep-producing remedies may be mentioned the absence, after its use, of disturbances of digestion, secretion, circulation and respiration; its easiness of administration, its tastelessness, its odorlessness, and finally, the important fact that the resulting sleep closely approximates in quantity and quality that of nature.

Since the foregoing observations were recorded, the use of sulfonal has been continued by the writer with similarly satisfactory results.





